MultiTech Conduit® IP67 Base Station

IP67 Conduit for Outdoor LoRa® Deployments
Global Models

LoRa Alliance®

MultiTech Conduit® IP67 Base Station is a ruggedized IoT gateway solution, specifically designed for outdoor LoRa® public or private network deployments. This highly scalable and certified IP67 solution is capable of resisting the harshest environmental factors including moisture, dust, wind, rain, snow and extreme heat, supporting LoRaWAN® applications in virtually any environment. The enhanced Conduit IP67 includes next generation LoRaWAN mCards capable of supporting thousands of LoRaWAN certified end nodes, including MultiTech Reveal™ Sensors, and mDots™* and xDots®*. This flexible solution provides durable, low-power, wide area connectivity in support of M2M and IoT applications for both LoRa service providers and individual enterprises wanting to expand their LoRa network coverage.

Designed for easy deployment, the solution includes a MultiTech Conduit with an updated LoRa MultiTech mCard™, IP67 enclosure, LoRa antenna to improve outdoor range and Ethernet or optional 4G-LTE backhaul. It can be deployed as part of an existing telecommunications tower, individual stand or wall mount.

*Represents ideal network configuration and equipment set up. Results vary depending on payload amount, transmission frequency, spreading factor used, as well as terrain, RF interference and obstruction type (e.g., metal, cement, etc.)

BENEFITS

- Global MNO and LoRaWAN support
- Greatly expands LoRa network coverage
- External antennas increase LoRa connectivity to remote assets
- Improved design enhancing thermal performance and easy external port access to SIM and USB connectors

FEATURES

- ISM band scanning for optimum LoRa performance
- Listen Before Talk operating protocol
- GNSS module for LoRaWAN packet fine-time-stamping and TDoA network-based location

www.multitech.com/IP67

mPower™ EDGE INTELLIGENCE

Programmable embedded software provides enhanced security and enables task execution at the edge for reduced latency and cost optimization.

mPower™ Edge Intelligence embedded software delivers programmability, network flexibility, enhanced security and manageability for scalable Industrial Internet of Things (IIoT) solutions.

mPower simplifies integration with a variety of popular upstream IoT platforms to streamline edge-to-cloud data management and analytics, while also providing the programmability and processing capability to execute critical tasks at the edge of the network to reduce latency; control network and cloud services costs, and ensure core functionality – even in instances when network connectivity may not be available.

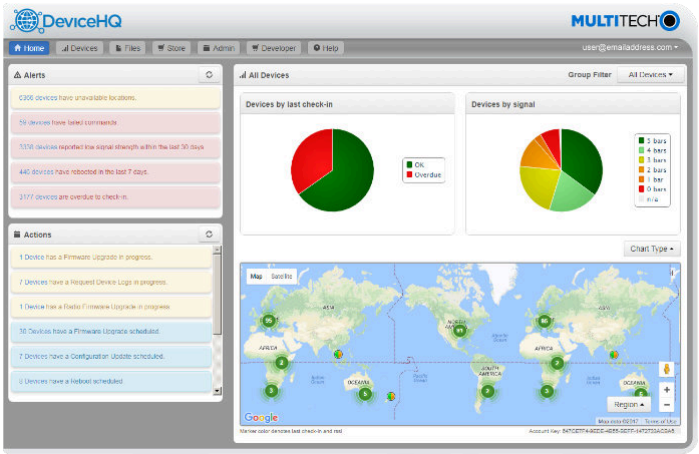
mPower software specifications can be found **here**.

LENS® Embedded Network Server & Key Management Toolset for LoRaWAN® Networks

LENS is a hybrid LoRaWAN® network management platform that enables deployment and management of LoRaWAN networks at scale. Designed for private and enterprise networks, LENS provides a site-by-site user account and centralized management for LoRa® end devices, as well as configuration and control of Conduit® gateways. LENS has the capability to assign unique access rights to individual users, add gateways and LoRa end nodes in bulk, or create separate organizations and network segmentation to support different IoT use cases or applications.

Cloud-based Application Store and IoT Device Management

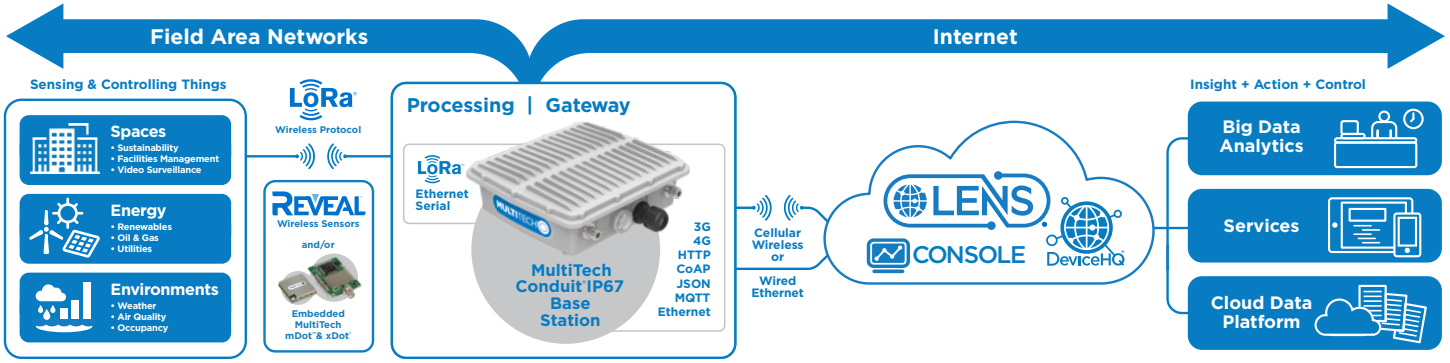
MultiTech DeviceHQ® is cloud-based tool set for managing the latest generation of MultiTech devices. It incorporates all the functionality of MultiTech Device Manager, on which so many M2M and IoT applications already rely for remote monitoring, upgrades and configuration of entire device populations – whether one or 1 million. DeviceHQ takes remote device management and maintenance to a new level, by providing an application marketplace, allowing users to browse applications or build their own then easily deploy them to and customize them for remote devices from anywhere.



SPECIFICATIONS

Description	MTCDTIP			
Models	868 Models		915 Models	
	-266A (GNSS only)	-267A (GNSS/WiFi/BT)	-266A (GNSS only)	-267A (GNSS/WiFi/BT)
General Specifications				
Input Voltage	9 VDC 1.7A input provided to 100 - 240 VAC 50/60 Hz external adaptor or fused DC Power Cable			
Processor and Memory	ARM9 processor with 32-Bit ARM & 16-Bit Thumb instruction sets • 400 MHz • 16K Data Cache • 16K Instruction Cache • 128X16 MB DDR RAM • 256 MB Flash Memory			
Wi-Fi/Bluetooth	N/A	Wi-Fi: 802.11abng (2.4 & 5 GHz) / Bluetooth: Classic 4.1 and BLE	N/A	Wi-Fi: 802.11abng (2.4 & 5 GHz) / Bluetooth: Classic 4.1 and BLE
GPS/GNSS	GNSS for LoRa Packet Fine-Time-Stamping / Concurrent GNSS connections: 3 GNSS Systems Supported: (default: concurrent GPS/QZSS/SBAS and GLONASS)			
LEDs**	PR (Power), ST (Status, user-programmable), L1 (user-defined), L2: (user-defined)			
LoRa Specifications (All models include MTAC-003 Gateway Accessory Card)				
LoRa Frequency Band	868 MHz		915 MHz	
LoRa Channel Plan	EU868 / IN865		AU915 / US915 / AS923 / KR920	
Channel Capacity	8-channels (half duplex)			
Spreading Factors	SF5 to SF12			
LoRa Maximum Output Power before Antenna	14 dBm - 27 dBm*		25.1 dBm	
Connectors				
Ethernet	RJ45 Ethernet jack (10/100 port) (PoE)			
USB HOST**	USB 2.0 Type A connector			
SIM**	3FF Micro SIM (-L4G1 models only)			
Antennas	GPS, female SMA / Cellular (MTCDTIP-L4G1 models only): female SMA / LoRa, Wi-Fi/BT: reverse polarity female SMA			
Physical Description				
Dimensions (L x W x H)	10.31" x 3.58" x 10.12" (262 mm x 91 mm x 257 mm)			
Weight	6.06 lbs (2.75 kg)			
Chassis Type	IP67-Rated, Aluminum			
Environmental				
Operating Temperature	-40° to +70° C			
Storage Temperature	-40° to +85° C			
Cellular Specifications (MTCDTIP-L4G1 models only)				
Mobile Network Operator	European Network Operators		AT&T / Verizon	
Cellular Radio	MTSMC-L4G1			
Cellular Performance	4G-LTE Category 4			
Cellular Fallback	3G - HSPA + / 2G - GPRS			
Frequency Band (MHz)	**4G FDD:** B1(2100), B2(1900), B3(1800), B4(AWS1700), B5(850), B7(2600), B8(900), B12/B13(700), B18(850), B19(850), B20(800), B25(1900), B26(850), B28(700) **4G TDD:** B38(2600), B39(1900), B40(2300), B41(2500) **3G:** B1(2100), B2(1900), B4(AWS1700), B5(850), B6(800), B8(900), B19(850) **2G:** B2(1900), B3(1800), B5(850), B8(900)			
Packet Data (LTE)	**4G-FDD:** Up to 150 Mbps peak downlink. Up to 50 Mbps peak uplink **4G-TDD:** Up to 130 Mbps peak downlink. Up to 30 Mbps peak uplink			
Certifications				
EMC Compliance	CE Mark, UKCA EN 55024:2010 (Immunity) EN 55032:2012/AC:2013 (Emissions)		US: FCC Part 15 Class A Canada: ICES-003 Class A Australia: CISPR 32	
Radio Compliance	**RED, Article 3.1b** EN 301 489-1 V2.2.3 (General) EN 301 489-3 V2.1.1 (SRD devices) EN 301 489-17 V3.2.2 (WiFi/BT) EN 301 489-19 V2.1.1 (GNSS receivers) EN 301 489-52 V1.1.0 (Cellular - MTCDTIP-L4G1 models only) **RED, Article 3.2** EN 303 413 V1.1.1 (GNSS) EN 300 328 V2.2.2 (2.4 GHz ISM) EN 301 511 V12.5.1 (GSM-2G - MTCDTIP-L4G1 models only) EN 301 893 V2.1.1 (5 GHz RLAN) EN 301 908-1 V13.1.1 (IMT Cellular 3G-4G - MTCDTIP-L4G1 models only) EN 301 908-2 V13.1.1 (WCDMA – 3G - MTCDTIP-L4G1 models only) EN 300 220-2 V3.2.1 (SRD devices) EN 301 908-13 V13.1.1 (LTE – 4G - MTCDTIP-L4G1 models only) EG 203 367 V1.1.1 (Multi-Radio transmissions) **MPE/RF Exposure: EN 62311:2008**		US: FCC Part 22, 24, 27 Canada: ISED Australia: AS/NZS 4268:2012 + A1:2013 MPE Standard 2014	
Safety	IEC 60950-1 2nd Edition + Am2:2013 / EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 IEC 62368-1:2014 / AC:2017			
Regulatory Approvals (Approvals Pending) Contact MultiTech for details	Anatel (Brazil), IFETEL (Mexico), SRRC/CCC/NAL (China), KC (South Korea), NCC (Taiwan, China), JATE/TELEC (Japan), FAC (Russia), NBTC (Thailand), IMDA (Singapore), ICASA (South Africa)			
Mobile Network Operator Approvals	GCF, European Network Operators		US: PTCRB, AT&T, Verizon*** Australia: RCM, Optus, Telstra, Vodafone	
Mobile Network Operator (Approvals Pending) Contact MultiTech for details	–		US: T-Mobile, US Cellular Canada: Rogers, Telus	
Quality	MIL-STD-810G: High Temp, Low Temp, Random Vibration / SAE J1455: Transit Drop & Handling Drop, Random Vibration, Swept-Sine Vibration / IEC68-2-1: Cold Temp			
Warranty	2-Years / www.multitech.com/legal/warranty			

* Maximum EIRP is 14 dBm for most of the band, except 27 dBm at 869.4-869.5 / ** SIM, LEDs, and USB port accessible under IP67-rated bottom cap cover / *** MTSMC-L4G1 is PTCRB, AT&T, and Verizon approved



IP67 BASE STATION STANDARD MOUNTING OPTIONS

Mounting Options
(optional accessories shown)

ORDERING INFORMATION

MultiTech Conduit® IP67 Base Station with Wi-Fi/BT/BLE Support

Model	Description	Region
MTCDTIP-L4G1-267A-868.R3	LTE Cat 4 mPower Conduit IP67 Base Station 8-channel, 868 MHz, GNSS+Wi-Fi/BT with MTAC-003E00 and Accessory Kit	Global
MTCDTIP-L4G1-267A-915.R3	LTE Cat 4 mPower Conduit IP67 Base Station 8-channel, 915 MHz, GNSS+Wi-Fi/BT with MTAC-003U00 and Accessory Kit	Global
Accessory Kit Includes: Mounting bracket kit, 1 LoRa antenna, 2 cellular antennas, GNSS antenna, Wi-Fi/BT antenna		
MTCDTIP-267A-868.R3	Ethernet-only mPower Conduit IP67 Base Station 8-channel, 868 MHz, GNSS+Wi-Fi/BT with MTAC-003E00 and Accessory Kit	Global
MTCDTIP-267A-915.R3	Ethernet-only mPower Conduit IP67 Base Station 8-channel, 915 MHz, GNSS+Wi-Fi/BT with MTAC-003U00 and Accessory Kit	Global
Accessory Kit Includes: Mounting bracket kit, 1 LoRa antenna, GNSS antenna, Wi-Fi/BT antenna		

MultiTech Conduit® IP67 Base Station

Model	Description	Region
MTCDTIP-L4G1-266A-868.R3	LTE Cat 4 mPower Conduit IP67 Base Station 8-channel, 868 MHz, GNSS with MTAC-003E00 and Accessory Kit	Global
MTCDTIP-L4G1-266A-915.R3	LTE Cat 4 mPower Conduit IP67 Base Station 8-channel, 915 MHz, GNSS with MTAC-003U00 and Accessory Kit	Global
Accessory Kit Includes: Mounting bracket kit, 1 LoRa antenna, 2 cellular antennas, GNSS antenna		
MTCDTIP-266A-868.R3	Ethernet-only mPower Conduit IP67 Base Station 8-channel, 868 MHz, GNSS with MTAC-003E00 and Accessory Kit	Global
MTCDTIP-266A-915.R3	Ethernet-only mPower Conduit IP67 Base Station 8-channel, 915 MHz, GNSS with MTAC-003U00 and Accessory Kit	Global
Accessory Kit Includes: Mounting bracket kit, 1 LoRa antenna, GNSS antenna		

RECOMMENDED ACCESSORIES

Model	Description	Region
MTKIT-MTCDTIP-MF-IP67	IP67 Accessory Kit w/Mounting Bracket, 5' Coax Cable N Type, Male/Female Connectors, IP67-rated Lightning Arrestor, Grounding Strap Adapter Kit, and Weatherproofing Kit	Global
LGT-ARRST-IP67-1	IP67-rated Lightning Arrestor and Grounding Strap Adapter Kit (1 Pk)	Global
LGT-ARRST-IP67-5	IP67-rated Lightning Arrestor and Grounding Strap Adapter Kit (5 Pk)	Global
CA-NTYPE-MF-1	Outdoor Coax Cable, N Type Male & Female connectors, 5 feet (1 Pack)	Global
CA-NTYPE-MF-5	Outdoor Coax Cable, N Type Male & Female connectors, 5 feet (5 Pack)	Global
MB-ANT-IP67-1	Conduit IP67 Antenna Mounting Bracket, Mounts One Antenna (1 Pack)	Global
MB-ANT-IP67-5	Conduit IP67 Antenna Mounting Bracket, Mounts One Antenna (5 Pack)	Global
AN868-915A-1-IP67	IP67 LoRa Antenna, 15.3" (4.5 dBi) (1 Pack)	Global
AN868-915A-5-IP67	IP67 LoRa Antenna, 15.3" (4.5 dBi) (5 Pack)	Global
ANLTE5-1-IP67	IP67 LTE Antenna, 7" (3.5 dBi) (1 Pack)	Global
ANLTE5-5-IP67	IP67 LTE Antenna, 7" (3.5 dBi) (5 Pack)	Global

Go to www.multitech.com for detailed product model numbers.

Services & Warranty

MultiTech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations.

Technical Support Services

At MultiTech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your MultiTech representative or visit multitech.com/product-support

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